



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/939,937	08/27/2001	Rui M. Amorin	D/A0941 (1508/3320)	8656
7590 Gunnar G. Leinberg, Esq. Nixon Peabody LLP Clinton Square P.O. Box 31051 Rochester, NY 14603-1051			EXAMINER AILES, BENJAMIN A	
			ART UNIT 2142	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/25/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

09/939,937

Applicant(s)

AMORIN ET AL

Examiner

Benjamin A. Ailes

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 and 31-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 31-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. This action is in response to correspondence filed 02 November 2006.
2. Claims 1-18 and 31-36 remain pending. Claims 19-30 are canceled.

***Response to Arguments***

3. Applicant's arguments with respect to claims 1-18 and 31-36 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 6, 7, 12, 13, 18, 31, 32 and 33 rejected under 35 U.S.C. 103(a) as being unpatentable over Spaur et al. (U.S. 6,122,514) in view of Poulter et al. (US 6,603,741 B1), hereinafter referred to as Poulter.
6. Regarding claims 1, 7 and 13, Spaur teaches a method for identifying one of a plurality of communication channels available for communication between one of a plurality of devices and a server, wherein the plurality of communication channels are formable between the server and cascadedly arranged controllers, each controller associated with one of the devices, including  $n$  inputs,  $n > 1$ , and a switching device configured to allow connection between one of the  $n$  inputs and the associated device and connection through the controller between the remaining  $n - 1$  inputs and  $n - 1$

Art Unit: 2142

outputs, and the  $n$  inputs of each succeeding controller in the cascade are respectively connected to  $n$  outputs of a preceding one of the controllers, the method comprising:

monitoring, at each of the controllers, each of the plurality of communication channels between the controller and the server (fig. 1, item 50, link controller/monitor, col. 9, ll. 46--57 wherein the link monitor is able to read and obtain the status of the link);

Spaur does teach of monitoring the status of the channels but does not explicitly teach the monitoring of the channels for link pulses wherein the presence of link pulses on one of the communication channels indicates that that particular communication channel are not currently being used for data transmission by the server and is available and providing the establishment of the connection channel. However, in related art, Poulter teaches on a link pulse exchange method wherein link pulses are used to establish a connection negotiate between for example a device and a server (col. 4, ll. 40-46). Through the negotiation process two network devices are able to monitor each other by way of the link pulses and complete an auto-negotiation process. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to utilize link pulses as taught by Poulter in combination with the channel selection method as taught by Spaur. One of ordinary skill in the art would have been motivated to make such a combination wherein Spaur teaches the need to change communication channels often (col. 10, ll. 34-38) and Poulter teaches that through the link pulse exchange the highest common mode can be negotiated (col. 4, ll. 49-51).

7. Independent claims 7 and 13 contain similar subject matter and are rejected under the same rationale as claim 1.

Art Unit: 2142

8. Regarding claim 6, Spaur and Poulter teach the method further comprising providing an indication of which of the plurality of communication channels was the established communication channel for the associated device (Spaur, col. 9, ll. 38-40).

9. Claims 12 and 18 contain similar subject matter and are rejected under the same rationale as claim 6.

10. Regarding claims 31, 32 and 33, Spaur and Poulter teach the method wherein said monitoring is performed for each of the associated devices, more than one of the associated devices are simultaneously connectable to different ones of the server ports determined to be available, and the communication channel of one of said simultaneously connected devices is formed through one of the inputs and outputs of a preceding one of the controllers in cascade (Spaur, col. 9, ll. 35-40, link controller/monitor obtains necessary information for certain types of channel monitoring wherein the link controller/monitor takes responsibility for the control and status of the network channels.).

11. Claims 2-5, 8-11, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spaur and Poulter in view of Allmond et al. (US 5,754,552), hereinafter referred to as Allmond.

12. Regarding claim 2, Spaur and Poulter do not expressly teach that the monitoring further comprises monitoring one of the plurality of communication channels at a time for the one or more link pulses. However, Allmond teaches that it is well known that a plurality of communication channels can be monitored for link pulses in a mutually-exclusive manner, or one at a time (column 6, lines 56-57). Spaur, Poulter and Allmond

Art Unit: 2142

are analogous art because they are from the same field of endeavor of networking data devices. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify Spaur and Poulter by allowing only one communication channel to be monitored at a time, as taught by Allmond. One of ordinary skill in the art would have been motivated for doing this is to sequentially monitor the communication channels. Therefore it would have been obvious to combine Allmond with Spaur and Poulter for the benefit of sequential monitoring to obtain the invention as specified in claim 2.

13. Claims 8 and 14 contain similar subject matter and are rejected under the same rationale as claim 2.

14. Regarding claim 3, Spaur and Poulter do not explicitly teach that the monitoring further comprises disabling the other of the plurality of communication channels while the one of the plurality of communication channels is monitored for the one or more link pulses. Allmond teaches that it is well known in the art that communication channels other than the one being monitored can be disabled (col. 6, lines 59-63). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to disable Spaur's unmonitored communication channels, as taught by Allmond. The motivation for doing so would have been to prevent potential interference from the unmonitored signals. Therefore, it would have been obvious to combine Allmond with Spaur and Poulter for the benefit of interference prevention to obtain the invention as specified in claim 3.

15. Claims 9 and 15 contain similar subject matter and are rejected under the same rationale as claim 3.

16. Regarding claim 4, Spaur and Poulter do not explicitly teach that the monitoring of one of the plurality of communication channels is conducted by two or more devices. Allmond teaches that it is well known in the art that one communication channel can be monitored by two devices (figure 1, items 124 and 128). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to allow one of Spaur's communication channels to be monitored by two or more devices. The motivation for doing so would have been to allow more than one device to utilize the connection on that particular communication channel. Therefore, it would have been obvious to combine Allmond with Spaur and Poulter for the benefit of connection utilization to obtain the invention as specified in claim 4.

17. Claim 10 contains similar subject matter and is rejected under the same rationale as claim 4.

18. Regarding claim 5, Spaur and Poulter do not explicitly teach that the method further comprises blocking the communication channel monitored to have the link pulses for the one device from the other devices. Allmond teaches that it is well known that the communication channel monitored to have the link pulses for a particular device can be blocked from other devices (col. 6, lines 59-63). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to allow Spaur's devices that aren't receiving link pulses to be blocked from the communication channel carrying the pulses to another device. The motivation for doing so would have been to

Art Unit: 2142

only allow the intended device to receive the pulses. Therefore, it would have been obvious to combine Allmond with Spaur and Poulter for the benefit of appropriate pulse delivery to obtain the invention as specified in claim 5.

19. Claim 11 contains similar subject matter and is rejected under the same rationale as claim 5.

20. Claims 16, 34-36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spaur and Poulter in view of Patel et al. (U.S. 5,883,894), hereinafter referred to as Patel.

21. Regarding claim 16, Spaur and Poulter does not explicitly teach that each of the devices has one of the monitoring systems. Patel teaches that it is well known that it is possible for each port to have an auto-negotiation system, which performs port monitoring (col. 4, lines 32-34). Spaur and Poulter and Patel are analogous art because they are both from the same field of endeavor of network devices. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide each of Spaur's devices with a monitoring system, as taught by Patel. The motivation for doing so would have been to allow each of the devices to monitor the plurality of communication channels. Therefore, it would have been obvious to combine Patel with Bennett for the benefit of allowing each device to monitor communication channels to obtain the invention as specified in claim 16.

22. Regarding claims 34-36, Spaur and Poulter do not explicitly disclose that each of the devices has one of the monitoring systems. Patel teaches that it is well known that it is possible for each port to have an auto-negotiation system, which performs port



Art Unit: 2142

monitoring (col. 4, lines 32-34). Spaur and Poulter are analogous art because they are both from the same field of endeavor of network devices. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide each of Spaur's devices with a monitoring system, as taught by Patel. The motivation for doing so would have been to allow each of the devices to monitor the plurality of communication channels. Therefore, it would have been obvious to combine Patel with Spaur and Poulter for the benefit of allowing each device to monitor communication channels to obtain the invention.

23. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spaur, Poulter and Patel in view of Allmond.

24. Regarding claim 17, Spaur, Poulter and Patel do not explicitly disclose that the system further comprises a blocking system that blocks the communication channel monitored to have the link pulses for the one device from the other devices. Allmond teaches that it is well known that the communication channel monitored to have the link pulses for a particular device can be blocked from the other devices (col. 6, lines 59-63). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to allow Spaur's devices that are not receiving link pulses to be blocked from the communication channel carrying the pulses to another device. The motivation for doing so would have been to only allow the intended device to receive the pulses. Therefore, it would have been obvious to combine Allmond with Spaur and Poulter and Patel for the benefit of appropriate pulse delivery to obtain the invention as specified in claim 17.

***Conclusion***

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Li (US 2002/0188750 A1) teaches near optimal fairness back off methods and systems.

Yang et al. (US 5,596,575) teaches an automatic network speed adapter.

Webber et al. (US 5,414,708) method and apparatus for connecting nodes for a computer network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin A. Ailes whose telephone number is (571)272-3899. The examiner can normally be reached on M-F 6:30-4, IFP Work Schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571)272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2142

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

baa



ANDREW CALDWELL  
SUPERVISORY PATENT EXAMINER

ANDREW CALDWELL  
SUPERVISORY PATENT EXAMINER